| Short Range Relay Planning Procedure (v03/22/04) | | |
|---|---|---|
| **Step** | **Description of Step** | **Command** |
| Short-Range Planning Product Generation | | |
| 1 | Login using your nipcec account to any of the well established sequence workstations. | |
| 2 | Go to the top of the SHORT directory and go into the directory that appropriately designates the next short-range relay-period-of-interest. Before retrieving any of the necessary files, look at the 'Reminder.txt' notes (if there are any) and note any special items that must be incorporated into the short-range run. Also, look at the README notes (if there are any) and note any special items that must be included. NOTE: Short Range runs generally start Thursday 00:00:00 GMT and are 7 days in duration. | cd /msop/seq_rw/seq_data/relay/short/<br>Or, type: 'cd_short' which is an alias that will take you to:<br>/msop/seq_rw/seq_data/relay/short |
| 3 | **Retrieve the last configuration APF** from the last SHOR**T** working directory and copy it into your **current** working directory. | cp -p /msop/seq_rw/seq_data/relay/short/<YYDOY-YYDOY>/<YYDOY-YYDOY.config.apf> . |
| 4 | **Verify** that its parameters are correct by calling the MERA & B Mission Planners.. | edit YYDOY-YYDOY.config.apf |
| 5 | Locate and copy to the present working directory the correct **RSOE's** for ODY and MGS. Ask the MGS and ODY SSE for the correct RSOE. | cp -p /msop/seq_rw/seq_data/map/mgs/<seqid>/<seqid>.##.rsoe<br>cp -p /msop/seq_rw/seq_data/map/ody/<seqid>/<seqid>.##.rsoe |
| 6 | **Retrieve the correct LOPTG for MERA and B**. Generally, the same LOPTG is used for the short range build that was used for the corresponding long range build. | |
| 7 | **Retrieve the request APF files from MER A & B** from the DOM and put them into your current working SHORT directory. If the files are not in the DOM at the required time, then call the Mission Planners from each project and let them know to deliver their respective products. | Location on DOM where the lander APFs are delivered:<br>/domops/data/m01/53/main/apf_relay |
| 8 | **Retrieve the INPUTS file** from the most recent relay product directory.<br>1). Change the INPUTS filename to the current relay period of interest,<br>2). Verify that the LOPTGs are the correct ones to use, if not, then input the correct ones,<br>3). Insert the correct corresponding monthly RSOE's for MGS and ODY,<br>4). Insert the request APF files delivered from MER A & B<br>5). Talk to the lead SSE from MGS and ODY and find out which mini-sequence id will be used and make the appropriate edit into the INPUTS file. | |
| 9 | **Build Autogen environment file.** The -x option can be used to terminate autogen prior to running APGEN. The <RUNID> **MUST** have the convention of <YYDOY-YYDOY.S00>. | autogen -x -type short_relay -config <config.apf.name> -inputs <inputs.name> -begin <begin time> -end <end time> <YYDOY-YYDOY.S00> |
| 10 | After the AUTOGEN run, look into the APGEN ENV file and verify that the input files are correct. | |
| 11 | If **non-relay periods** need to be added into the APGEN ENV file, then edit the non-relay periods file and add as many ACTIVITY INSTANCES as needed. Then, add the non-relay periods file into the ENV file. | cp ../../non-relay-period-template.apf ./non-relay.apf,<br>then edit ./non-relay.apf |
| 12 | **Check for zero-size or small file sizes**. If there are any, then the scripting didn't run right, the file is bad, or you didn't specify a filename (or path) correctly. If this is the case, you can re-run from scratch to correct your mistake, or you can use the scripts listed under the command column to generate the incorrect or non-existent apf products. | strip_file_to_apf<br>strip_soe_to_apf |
| 13 | If everything looks okay, run APGEN | autogen <YYDOY-YYDOY.S00> |
| 14 | APGEN GUI will pop-up. **NOTE: With BGL no longer included, there will be errors generated saying "Nothing to Detail", these are accpetable errors** | In another window, check the apgen.notes.temp file<br>less <YYDOY-YYDOY.S00>.apgen.notes.temp |
| 15 | If there are errors while executing APGEN, then exit APGEN and look into the run log file to determine what the error is. | |

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| 16 | To capture apgen screen shots, zoom in on the area of interest by using the Absolute Pan/Zoom function. From a terminal window: | To bring up Xview, type: **xv**<br>1). Right-click on the Xview window that appears,<br>2). Another window (xv controls) will pop up<br>3). Click on the Grab button, another window appears<br>4). Put in a delay of 5 seconds and click AutoGrab,<br>5). Left-click then middle-click on the Autogen screen,<br>6). Another window should appear with the screen shot, if not, then the image was not captured,<br>7). In the xv controls, save as JPEG image. |
| 17 | Check the mini-sequences for duplicate pass errors. | dup_pass <mini-seqid>.sasf |
| 18 | **Go over the APGEN NOTES:**<br>1). Become familiar with any conflicts and understand where they originated from,<br>2). Verify that all the spacecraft are represented in the APGEN NOTES,<br>3). Look for forward and return latency miscalcultations (Generelly a note appears stating "latency not calculated properly". If there are some, you may have to hand calculate the latency and edit the Notes file.<br>4). The MGS return latencies may need massaging, have the MGS SSE check the notes file before delivering.<br>5). Confirm that the MGS beacon OFF times listed does not correspond to a Requested overflight between another orbiter and MER. Since MGS is no longer turning off it's beacon, if the pass is requested, potential RFI may exist. | |
| 19 | After all the Short-Range Products have been generated, review the mini-sequence SASFs to ensure they are correct. Talking with the Lead SSE might be helpful. | |
| Short-Range Product Delivery and Notification | | |
| 1 | FTP the '<runid>.S00.apgen.notes', the config APF and the INPUTS files to the relay webpage. Then email the relay group at the uhf-planning@list.jpl.nasa.gov distribution list to indicate which input files were used (RSOEs and LOPTGs) and any Odyssey gaps reported in the report, any lines with "CONFLICT" or "PROBLEM" in the text (get screen captures of the offending time periods and FTP them to the correct webpage. | Type: ftp_relay -short -text <notes/config/inputs.file.name><br>and/or: ftp_relay -short -picture <screen.capture.file.name><br>then: ftp_relay -update<br>(this will require entering the nipcec account password for mgsw3) |
| 2 | Generate a SHORT RANGE RELAY KICKOFF form. Go to the mmocm.jpl.nasa.gov website and fill out the KICKOFF form. | |
| 3 | Email the UHF Relay Group using the uhf-planning@list.jpl.nasa.gov distribution list to notify them that there's a Short-Range Relay Coordination meeting. Also, attach the Agenda for the meeting. The notification should include:<br>1). Date and Time of meeting (Pacific Time),<br>2). Meeting Location,<br>3). Meet-me number,<br>4). Period of Interest,<br>5). Location of the KICKOFF form,<br>6). Location of the <YYDOY-YYDOY.S00>.apgen.notes, config APF and the INPUTS files. | **Meeting Agenda:**<br>**1). Go Over Kickoff Form**<br>**2). Highlight changes to the configuration APF**<br>**3). Review the apgen.notes file**<br>**4). Poll the teams: ODY, MGS, MOC team, MER, BGL**<br>**5). Kickoff Form Approval** |
| Login to the 264-215 Network | | |

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| 1 | On the small table screen in the conference room,<br>1). Turn on screen to view the display, then select 'House Laptop', then selct 'Projector'.<br>2). Then click on 'Cygwin', then at the prompt, type 'startx' then shrink the screen<br>3). Select SSH Secure Shell Client,<br>4). Type your userid, and under 'Authentic Code', choose 'Password' and press 'Return', then type your password followed by a secureid number.<br>5). Then login to your nipcec account: slogin -l <nipcec_username> <machine_name> | |
| 2 | After you have successfully logged in, login to your NIPCEC account and type 'cd_relay' which will take you to the top of the relay directory. From there, you'll be able to edit the designated request APF file, the APGEN ENV file and run the AUTOGEN software. | |
| Kickoff Form Approval | | |
| 1 | If everybody is in agreement with the relay products, and the Relay AUTOGEN tool does not need to be re-run, then poll the Mission Managers for KICK-OFF Form approval. | |
| 2 | A field in the Kick-Off form is provided for the Mission Manager's name. | |
| Updating the Short Range Products | | |
| 1 | Typically, short range products need to be updated when the config apf is changed, the request APF changes, changes to orbiter background state (update to RSOE), etc. | |
| 2 | To re-run the AUTOGEN TOOL:<br>1). Copy the Inputs file to a '.S01' version,<br>2). Update the inputs to source the correct files | cp -p <YYDOY-YYDOY>.inputs <YYDOY-YYDOY.S01>.inputs |
| 3 | Initiate autogen script with the following command line. The -x option can be used to terminate autogen prior to running APGEN. The <RUNID> **MUST** have the convention of <YYDOY-YYDOY.S00>. | autogen -x -type short_relay -config <config.apf.name> -inputs <inputs.name> -begin <begin time> -end <end time> <YYDOY-YYDOY.S00> |
| 4 | Copy the MGS and ODY mini-sequences to 'old'. This is so that the Short-Range Meeting coordinator can compare the previous mini-sequences to the updated mini-sequences to verify that the updates are correctly implemented in the updated mini-sequences. | mv mzxxx.sasf mzxxx_old.sasf<br>mv cz5xx.sasf cz5xx_old.sasf |
| 5 | Re-run the RELAY AUTOGEN TOOL | autogen <YYDOY-YYDOY.S01> |
| 6 | Do a review of revised mini-sequences for duplicate pass errors. | **dup_pass <mini-seqid>.sasf** |
| 7 | Do a compare between the 'old' SASFs and the updated SASFs. | **tkdiff mzxxx_old.sasf mzxxx.sasf**<br>**tkdiff cz5xx_old.sasf cz5xx.sasf** |
| 8 | Update the Kick-off form | |
| 9 | After checking over the apgen.notes file, deliver the long range products to the web (See above for steps) | |
| 10 | Send an email to the uhf-planning@list.jpl.nasa.gov and let them know that the updated short-range relay products are on the relay webpage. | |
| 11 | Get the appropriate MER/MGS/ODY approvals and approve the kickoff form | |